

**EXHIBIT 1**  
**CURRICULUM VITAE**

**DECEMBER 2008**

**I. PERSONAL**

Christopher Cox, Ph. D.  
422 Hoffman Road  
Harleysville, PA 19438  
(267) 210-3474

**II. EDUCATION**

Johns Hopkins University, Baltimore, MD	1999
Organic Chemistry Ph. D.	
Towson State University, Towson, MD	1994
Chemistry B. S.	Summa Cum Laude

**III. MERCK/MRL EMPLOYMENT HISTORY**

Medicinal Chemistry

Sr. Research Chemist	11/2001 - 9/2004
Research Fellow	10/2004 - 3/2008
Sr. Research Fellow	4/2008 - Present

**IV. NON-MERCK EMPLOYMENT HISTORY**

**V. ACADEMIC EXPERIENCE**

NIH Postdoctoral Fellow	Columbia University, New York, NY	1999 - 2001
Graduate Student	Johns Hopkins University, Baltimore, MD	1994 - 1999
Undergrad. Res. Asst.	Towson State U., Towson, MD	1994
NSF-REU Fellow	University of Maryland, College Park, MD	1993

**VI. TRAINING**

## **VII. SOCIETY MEMBERSHIPS**

Sigma Xi Member  
American Chemical Society

## **VIII. ACADEMIC AND PROFESSIONAL HONORS**

NIH Postdoctoral Fellowship	1999
Kilpatrick Graduate Fellowship	1998
ACS, Div. Of Organic Chem., Graduate Fellowship	1997
Ernest M. Marks Fellowship	1997
ACS, MD Section, Outstanding Student Award	1994
NSF-REU Fellowship	1993
Merck Index Achievement Award in Organic Chem.	1992

## **IX. PUBLICATIONS AND PATENTS**

### **PUBLICATIONS**

1. "Brazilian Baccharis Toxins: Livestock Poisoning and the Isolation of Macrocyclic Trichothecene Glucosides."  
B. Jarvis, S. Wang, C. Cox, M. Rao, V. Philip, M. Varaschin, C. Barros  
*Natural Toxins* **1996**, 4, 58-71.
2. "Copper(II)-Catalyzed Amide Isomerization: Evidence for N-Coordination."  
C. Cox, D. Ferraris, N. N. Murthy, T. Lectka  
*J. Am. Chem. Soc.* **1996**, 118, 5332-5333
3. "Crystal Structure and Triboluminescence 2. 9-Anthracenecarboxylic Acid and its Esters."  
L. Sweeting, A. Rheingold, J. Gingerich, A. Rutter, R. Spence, C. Cox, T. Kim  
*Chem. Mater.* **1997**, 9, 1103-1115.
4. "Intramolecular Catalysis of Amide Isomerization."  
C. Cox, V. G. Young Jr., T. Lectka  
*J. Am. Chem. Soc.* **1997**, 119, 2307-2308.
5. "Solvent Effects on the Barrier to Rotation in Carbamates."  
C. Cox, T. Lectka  
*J. Org. Chem.* **1998**, 63, 2426-2427.
6. "Orthogonal" Lewis Acids: Catalyzed Ring Opening and Rearrangement of Acyl Aziridines."  
D. Ferraris, W. J. Drury III, C. Cox, T. Lectka  
*J. Org. Chem.* **1998**, 63, 4568-4569

**PUBLICATIONS (continued)**

7. "Intramolecular Catalysis of Amide Isomerization: Kinetic Consequences of the 5-NH--N<sub>a</sub> Interaction in Prolyl Peptides."  
C. Cox, T. Lectka  
*J. Am. Chem. Soc.* **1998**, 120, 10660-10668.
8. "Diastereo- and Enantioselective Alkylation of  $\alpha$ -Imino Esters with Enol Silanes catalyzed by R-Tol-BINAP-CuClO<sub>4</sub>·(MeCN)<sub>2</sub>."  
D. Ferraris, B. Young, C. Cox, W. J. Drury III, T. Dudding, T. Lectka  
*J. Org. Chem.* **1998**, 63, 6090-6091.
9. "A Novel Synthesis of  $\alpha$ -Amino Acid Derivatives through Catalytic Enantioselective Ene Reactions of  $\alpha$ -Imino Esters."  
W. J. Drury III, D. Ferraris, C. Cox, B. Young, T. Lectka  
*J. Am. Chem. Soc.* **1998**, 120, 11006-11007.
10. "Strong Hydrogen Bonding to the Amide Nitrogen of an "Amide Proton Sponge": Consequences for Structure and Reactivity."  
C. Cox, H. Wack, T. Lectka  
*Angew. Chem., Int. Ed. Engl.* **1999**, 38, 798-800.
11. "Nucleophilic Catalysis of Amide Isomerization."  
C. Cox, H. Wack, T. Lectka  
*J. Am. Chem. Soc.* **1999**, 121, 7963-7964.
12. "Intramolecular Acid-Catalyzed Amide Isomerization."  
C. Cox, T. Lectka  
*Org. Lett.* **1999**, 1, 749-752.
13. "Synthetic Catalysis of Amide Isomerization."  
C. Cox, T. Lectka  
*Acc. Chem. Res.* **2000**, 33, 849-858.
14. "Synthesis of the Functionalized Tricyclic Core of Lactonamycin by Oxidative Dearomatization."  
C. Cox, S. J. Danishefsky  
*Org. Lett.* **2000**, 2, 3493-3496.
15. "Concise Synthesis of a Lactonamycin Model System by Diastereoselective Dihydroxylation of a Highly Functionalized Naphthoquinone."  
C. Cox, S. Danishefsky  
*Org. Lett.* **2001**, 3, 2899-2902.

**PUBLICATIONS (continued)**

16. "Catalytic, Enantioselective Alkylation of  $\alpha$ -Imino Esters: The Synthesis of Nonnatural  $\alpha$ -Amino Acid Derivatives."  
D. Ferraris, B. Young, C. Cox, T. Dudding, W. Drury III, L. Ryzhkov, A. Taggi, T. Lectka  
*J. Am. Chem. Soc.* **2002**, *124*, 67-77.
17. "Studies Directed Toward the Total Synthesis of Lactonamycin: Control of the Sense of Cycloaddition of a Quinine Through Directed Intramolecular Catalysis."  
C. Cox, T. Siu, S. Danishefsky  
*Angew. Chem., Int. Ed. Engl.* **2003**, *42*, 5625-5629.
18. "Total Synthesis of Lactonamycinone."  
T. Siu, C. Cox, S. Danishefsky  
*Angew. Chem., Int. Ed. Engl.* **2003**, *42*, 5629-5634.
19. "Two-Step Synthesis of  $\beta$ -Alkylchalcones and Their Use in the Synthesis of 3,5-Diaryl-5-Alkyl-4,5-Dihydropyrazoles."  
C. Cox, M. Breslin, B. Mariano  
*Tetrahedron Lett.* **2004**, *45*, 1489-1493.
20. "Kinesin Spindle Protein (KSP) Inhibitors. Part 1: The Discovery of 3,5-diaryl-4,5-dihydropyrazoles as Potent and Selective Inhibitors of the Mitotic Kinesin KSP."  
C. Cox; M.J. Breslin; B.J. Mariano; P.J. Coleman; C.A. Buser; E.S. Walsh; K. Hamilton; H.E. Huber; N.E. Kohl; M. Torrent; Y. Yan; L.C. Kuo; G.D. Hartman  
*Bioorg. & Med. Chem. Lett.* **2005**, *15*, 2041-2045.
21. "Kinesin Spindle Protein (KSP) Inhibitors. Part 4: Structure-based Design of 5-alkylamino-3,5-diaryl-4,5-dihydropyrazoles as Potent, Water-soluble Inhibitors of the Mitotic Kinesin KSP."  
C. Cox; M. Torrent, M.J. Breslin; B.J. Mariano; D.B. Whitman, P.J. Coleman; C.A. Buser; E.S. Walsh; K. Hamilton; M.D. Schaber, R.B. Lobell, W. Tao, V.J. South; N.E. Kohl; Y. Yan; L.C. Kuo; T. Prueksaritanont; D.E. Slaughter; C.Li; E. Mahan; B. Lu; G.D. Hartman  
*Bioorg. & Med. Chem. Lett.* **2006**, *16*, 3175-3179.

## **PUBLICATIONS (continued)**

22. "Kinesin Spindle Protein (KSP) Inhibitors. Part V: Discovery of 2-Propylamino-2,4-Diaryl-2,5-Dihdropyrroles as Potent, Water-Soluble KSP Inhibitors, and Modulation of their Basicity by  $\beta$ -Fluorination to Overcome Cellular Efflux by P-Glycoprotein."  
C. Cox; M.J. Breslin; D.B. Whitman, P.J. Coleman; R.M. Garbaccio; M.E. Fraley; M.M. Zrada; C.A. Buser; E. S. Walsh; K. Hamilton; R. B. Lobell, W. Tao; M.T. Abrams; V.J. South; H.E. Huber; N.E. Kohl, G.D. Hartman.  
*Bioorg. & Med. Chem. Lett.* **17**, 2697-2702 (2007).
23. " Kinesin spindle protein (KSP) inhibitors. Part 6: Design and synthesis of 3,5-diaryl-4,5-dihdropyrazole amides as potent inhibitors of the mitotic kinesin KSP."  
Coleman, Paul J.; Schreier, John D.; Cox, Christopher D.; Fraley, Mark E.; Garbaccio, Robert M.; Buser, Carolyn A.; Walsh, Eileen S.; Hamilton, Kelly; Lobell, Robert B.; Rickert, Keith; Tao, Weikang; Diehl, Ronald E.; South, Vicki J.; Davide, Joseph P.; Kohl, Nancy E.; Yan, Youwei; Kuo, Lawrence; Prueksaritanont, Thomayant; Li, Chunze; Mahan, Elizabeth A.; Fernandez-Metzler, Carmen; Salata, Joseph J.; Hartman, George D.  
*Bioorganic & Medicinal Chemistry Letters* , **17**(19), 5390-5395. (2007)
24. "Kinesin Spindle Protein (KSP) Inhibitors. 9. Discovery of (2S)-4-(2,5-Difluorophenyl)-N-[3R,4S)-3-fluoro-1-methylpiperidin-4-yl)-N-methyl-2-phenyl-2,5-dihydro-1H-pyrrole-1-carboxamide (MK-0731) for the Treatment of Taxane- Refractory Cancer."  
C.D. Cox, P.J. Coleman, M.J. Breslin, D.B. Whitman, R.M. Garbaccio, M.E. Fraley...Y. Yan, ...G.D. Hartman  
*J. Med. Chem.*, **51**, 4239-4252, (2008)

## **X. OTHER ACCOMPLISHMENTS**

### **INVITED LECTURES**

1. "Discovery of L-001154704: A Potent and Selective Inhibitor of the Mitotic Kinesin KSP".  
Merck Chemistry Council Conference, La Sapiniere, Quebec - Canada  
August 2004
2. "Intramolecular Catalysis of Amide Isomerization and its Role in Protein Folding".  
Towson State University, Towson, MD  
May 1998.

### **INVITED LECTURES (continued)**

3. "Discovery of Kinesin Spindle Protein Inhibitor MK-0731 for the Treatment of Taxane-Refractory Cancer".  
Johns Hopkins University  
April 30, 2008:

### **PRESENTATIONS**

1. "Discovery and optimization of kinesin spindle protein (KSP) inhibitors."  
Cox, Christopher D.; Coleman, Paul J.; Fraley, Mark E.; Garbaccio, Robert M.; Breslin, Michael J.; Whitman, David B.; Schreier, John D.; Hartman, George D.; Torrent, Maricel; Lobell, Rob; Buser, Carolyn; Tao, Weikang; Huber, Hans; Kohl, Nancy E.; Yan, Youwei; Kuo, Lawrence C.  
Abstracts of Papers, 233rd ACS National Meeting, Chicago, IL, United States, March 25-29, 2007 (2007), MEDI-211.
2. "HTS to MK-0731: The Role of Fluorine in Optimization of Kinesin Spindle Protein (KSP) Inhibitors for the Treatment of Cancer."  
*Spring ACS National Meeting*, April 7, 2008 (2008)
3. "Chemical Strategies to Alter P-Glycoprotein Efflux of Drug Molecules"  
*Spring ACS National Meeting*, April 8, 2008 (2008)